



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2012-0298; Directorate Identifier 2011-NM-072-AD; Amendment 39-17096; AD 2012-12-16]**

**RIN 2120-AA64**

**Airworthiness Directives; Bombardier, Inc. Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Bombardier, Inc. Model DHC-8-400 series airplanes. This AD was prompted by reports of cracking of certain fuel access panels of the outer wing. This AD requires an external inspection, and if necessary an internal inspection, to determine if certain fuel access panels are installed, and replacement if necessary; optional repetitive inspections for cracking of the fuel access panels, and replacement if necessary, would defer the internal inspection; and eventual replacement of affected fuel access panels with new panels. We are issuing this AD to prevent cracking of fuel access panels, which could result in arcing and ignition of fuel vapor in the outer wing fuel tank during a lightning strike.

**DATES:** This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of

certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may examine the AD docket on the Internet at

<http://www.regulations.gov> or in person at the U.S. Department of Transportation,

Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New

Jersey Avenue SE., Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Aziz Ahmed, Aerospace Engineer,

Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft

Certification Office, 1600 Stewart Avenue, Suite 40, Westbury, New York 11590;

telephone (516) 228-7329; fax (516) 794-5531.

#### **SUPPLEMENTARY INFORMATION:**

##### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on March 27, 2012 (77 FR 18135). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

[Canadian] Airworthiness Directive (AD) CF-2005-37 was issued on 11 October 2005 to address cracking of the outer wing fuel access panel, Part Number (P/N) 85714230-001. Similar cracking on an outer wing fuel access panel, P/N 85714231-001, has been reported. Further investigation revealed that certain fuel access panels may have seal grooves manufactured with non-conforming fillet radii which could lead to cracking. Cracking of the fuel access panel, if not corrected, could result in arcing and ignition of fuel vapor in the outer wing fuel tank during a lightning strike.

This [TCCA] directive mandates the inspection and replacement of the affected fuel access panels.

Required actions include an external detailed inspection of the outer wing access panels for rivets of the identification plate, and an internal inspection of panels without rivets to determine if the identification plate is installed, and replacing the fuel access panel if necessary. As an option, this AD allows repetitive external detailed inspections for cracking of the fuel access panels and, replacing if necessary, until the internal inspection is done. This AD also requires eventually replacing the affected fuel access panels with a new fuel access panels. You may obtain further information by examining the MCAI in the AD docket.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM (77 FR 18135, March 27, 2012) or on the determination of the cost to the public.

### **Conclusion**

We reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed.

### **Costs of Compliance**

We estimate that this AD will affect 74 products of U.S. registry. We also estimate that it will take about 36 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$33,632 per product. Where the service information lists required parts costs that are covered under warranty, we have assumed that there will be no charge for these

parts. As we do not control warranty coverage for affected parties, some parties may incur costs higher than estimated here. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$2,715,208, or \$36,692 per product.

### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;

2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);

3. Will not affect intrastate aviation in Alaska; and

4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains the NPRM (77 FR 18135, March 27, 2012), the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

**§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new AD:

**2012-12-16 Bombardier, Inc.:** Amendment 39-17096. Docket No. FAA-2012-0298; Directorate Identifier 2011-NM-072-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Bombardier, Inc. Model DHC-8-400, -401, and -402 airplanes; certificated in any category; serial numbers 4001 and 4003 through 4106 inclusive.

**(d) Subject**

Air Transport Association (ATA) of America Code 57, Wings.

**(e) Reason**

This AD was prompted by reports of cracking of certain fuel access panels of the outer wing. We are issuing this AD to prevent cracking of fuel access panels, which could result in arcing and ignition of fuel vapor in the outer wing fuel tank during a lightning strike.

**(f) Compliance**

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

**(g) Inspection and Replacement of Part Number (P/N) 85714231-001**

Within 600 flight hours after the effective date of this AD, do an external detailed inspection of the outer wing access panels having P/N 85714231-001 to locate the rivets of the identification plates, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-57-22, Revision B, dated February 16, 2011. If the rivets of the identification plate are found, no further action is required by this paragraph for that fuel access panel. If the rivets of the identification plate cannot be found: Before further flight, do the actions specified in paragraph (g)(1) or (g)(2) of this AD.

(1) Remove fuel access panels having P/N 85714231-001 and inspect the panels to determine if the identification plate is installed, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-57-22, Revision B, dated February 16, 2011. If the identification plate is found: No further action is required by paragraph (g) of this AD for that fuel access panel.

(i) If the identification plate cannot be found, and the job detail number stamped on the underside of the access panel does not match any of those listed in table 1 of the Accomplishment Instructions of Bombardier Service Bulletin 84-57-22, Revision B, dated February 16, 2011: No further action is required by paragraph (g) of this AD for that fuel access panel.

(ii) If the identification plate cannot be found, and the job detail number stamped on the underside of the fuel access panel does match any of those specified in table 1 of

the Accomplishment Instructions of Bombardier Service Bulletin 84-57-22, Revision B, dated February 16, 2011: Before further flight, replace the fuel access panel with a new fuel access panel having P/N 85714231-003, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-57-22, Revision B, dated February 16, 2011.

(2) Do an external detailed inspection on fuel access panels having P/N 85714231-001 for cracking, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-57-22, Revision B, dated February 16, 2011. If no cracking is found: Repeat the inspection thereafter at intervals not to exceed 600 flight hours until the replacement specified in paragraph (g)(2)(i) of this AD, or the inspection specified in paragraph (g)(1) of this AD, is done.

(i) If the fuel access panel is found cracked during any inspection required by this AD: Before further flight, replace the fuel access panel with a new fuel access panel having P/N 85714231-003, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-57-22, Revision B, dated February 16, 2011.

(ii) Within 6,000 flight hours after the initial inspection required by paragraph (g)(2) of this AD, do the actions specified by paragraph (g)(1) of this AD, unless the replacement required by paragraph (g)(2)(i) of this AD is done.

**(h) Inspection and Replacement of P/N 85714232-001**

Within 1,200 flight hours after the effective date of this AD, do an external detailed inspection of the outer wing access panels having P/N 85714232-001 to locate the rivets of the identification plates, in accordance with the Accomplishment Instructions



of Bombardier Service Bulletin 84-57-23, Revision B, dated February 16, 2011. If the rivets of the identification plate are found: No further action is required by this paragraph for that fuel access panel. If the rivets of the identification plate cannot be found: Before further flight, do the actions specified in paragraph (h)(1) or (h)(2) of this AD.

(1) Remove fuel access panels having P/N 85714232-001 and inspect the panels to determine if the identification plate is installed, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-57-23, Revision B, dated February 16, 2011. If the identification plate is found: No further action is required by paragraph (h) of this AD for that fuel access panel.

(i) If the identification plate cannot be found, and the job detail number stamped on the underside of the access panel does not match any of those specified in table 1 of the Accomplishment Instructions of Bombardier Service Bulletin 84-57-23, Revision B, dated February 16, 2011: No further action is required by paragraph (h) of this AD for that fuel access panel.

(ii) If the identification plate cannot be found, and the job detail number stamped on the underside of the fuel access panel does match any of those specified in table 1 of the Accomplishment Instructions of Bombardier Service Bulletin 84-57-23, Revision B, dated February 16, 2011: Before further flight, replace the fuel access panel with a new fuel access panel having P/N 85714232-003, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-57-23, Revision B, dated February 16, 2011.

(2) Do an external detailed inspection on fuel access panels having

P/N 85714232-001 for cracking, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-57-23, Revision B, dated February 16, 2011. If no cracking is found: Repeat the inspection thereafter at intervals not to exceed 1,200 flight hours until the replacement specified in paragraph (h)(2)(i) of this AD, or the inspection specified in paragraph (h)(1) of this AD, is done.

(i) If the fuel access panel is found cracked during any inspection required by this AD: Before further flight, replace the fuel access panel with a new fuel access panel having P/N 85714232-003, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-57-23, Revision B, dated February 16, 2011.

(ii) Within 12,000 flight hours after the initial inspection required by paragraph (h)(2) of this AD, do the actions specified in paragraph (h)(1) of this AD, unless the replacement required by paragraph (h)(2)(i) of this AD is done.

**(i) Parts Installation**

As of the effective date of this AD, no person may install a fuel access panel having P/N 85714231-001 and a job detail number listed in table 1 of the Accomplishment Instructions of Bombardier Service Bulletin 84-57-22, Revision B, dated February 16, 2011; or having P/N 85714232-001 and a job detail number listed in table 1 of the Accomplishment Instructions of Bombardier Service Bulletin 84-57-23, Revision B, dated February 16, 2011; on any airplane.

**(j) Credit for Previous Actions**

This paragraph provides credit for inspections and fuel access panel replacements required by this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 84-57-22, Revision A, dated December 9, 2010; or

Bombardier Service Bulletin 84-57-23, Revision A, dated December 9, 2010; as applicable.

**(k) Other FAA AD Provisions**

The following provisions also apply to this AD:

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, New York ACO, ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

**(2) Airworthy Product:** For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

**(I) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the following service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise.

(i) Bombardier Service Bulletin 84-57-22, Revision B, dated February 16, 2011.

(ii) Bombardier Service Bulletin 84-57-23, Revision B, dated February 16, 2011.

(3) For Bombardier, Inc. service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; e-mail [thd.qseries@aero.bombardier.com](mailto:thd.qseries@aero.bombardier.com); Internet <http://www.bombardier.com>.

(4) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information

on the availability of this material at an NARA facility, call 202-741-6030, or go to

[http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Renton, Washington, on June 11, 2012.

Kalene C. Yanamura,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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